Pearson Education, Inc.
Algebra I, Algebra I

Degree of Evidence regarding the Standards for Mathematical Practice:

Limited Evidence

Summary of evidence:

1. **Make sense of problems and persevere in solving them**. There are some open-ended questions in each section and in the practice problems. These questions are labeled "open-ended" and there is one per section. The resource makes connections among tables, graphs, equations, and situations, for example Chapter 4. Some problems ask the students to take an example and write an equation, table, and graph, but in the sample reviewed, there was no follow-up for students that connect the link between the representations. There are some questions where students are asked to write equations for ordered pairs and explain their reasoning. Students are asked to explain as part of some of the problems in the practice exercises. There is a specified problem-solving plan, and often one approach is given.
2. **Reason abstractly and quantitatively**. There are some real-world application problems in each section. Each section is introduced with a real-world application problem, and students are asked to justify their answer. Students are asked to use symbols to represent real-world problems, but it is scripted. There are opportunities for students to answer the application problems in correct units. Rarely are students asked to make sense of their answers to a real-world problem. There are some opportunities for students to practice with mathematical symbols without context as well as in context.
3. **Construct viable arguments and critique the reasoning of others**. There are some error analysis questions – roughly one per section. There are some opportunities to explain, for example "reasoning" and sometimes in the "writing" questions in the section and practice problems. There are very limited opportunities to make and test conjectures. Based on chapters reviewed in the student text (no teacher resource was available), there are no explicit opportunities for students to communicate with each other about justification or understanding.
4. **Model with mathematics**. Students are asked to create models for real-world applications. Models are used occasionally for difficult mathematical ideas, but they are often in a separate section, so they could be omitted. Determining reasonableness and revision of methods is not mentioned. There is not much opportunity for students to revise their results. Students are asked occasionally to create and use mathematical models.
5. **Use appropriate tools strategically.** "Concept Byte" lessons are technology lessons that require students to use graphing calculators. Graphing calculators are used occasionally to explore mathematical ideas. However, this is in a separate section, so it could be skipped. Graphing calculators are referenced in sections as part of learning, but in the chapters reviewed, there is limited to no other technology mentioned. There is limited to no contrasting advantages and shortcomings of models or technology. Algebra software is not referenced in the chapters reviewed. Students get little to no experience comparing the effectiveness and usefulness of different models or technology.
6. **Attend to precision.** Examples use proper notation and are precise. In the chapters reviewed, an example of precise communication, such as a sample student conversation, is not present. Students are given minimal opportunities to communicate. There is attention to precision in the examples, but no discussion for students to tackle.
7. **Look for and make use of structure**. Rules are given, and then examples apply the rules.

Sometimes students are asked to generalize after seeing limited patterns (1 or 2 examples in the sample reviewed), but patterns are rarely used for students to generalize about mathematics. Prior learning is referenced, but it is to tell students they have done the topic (or something similar) before. It is not used to expand a concept or to connect mathematical structure.

8. **Look for and express regularity in repeated reasoning.** Students very rarely if ever (in the chapters reviewed) use repetition to recognize patterns and make generalizations. No opportunity for students to use patterns to discover shortcuts for themselves was found in the chapters reviewed.